Section II (Remarks)

By the present amendment, claim 11 has been amended to recite that "nickel or nickel alloy layer is adapted to exhibit a response indicative of the presence or change of concentration of a target gas species." No new matter within the meaning of 35 U.S.C. 132 has been introduced by the foregoing amendment.

A. Summary of Examiner Interview Conducted on January 25, 2007

On January 25, 2007, the undersigned spoke telephonically with the Examiner regarding the rejection of claim 11 relative to the newly-cited U.S. Patent No. 5,229,625 to Suzuki et al. ("Suzuki"). The undersigned pointed out that claim 11 recites a "gas sensor assembly," whereas Suzuki discloses semiconductor devices such as transistors, resitors, and capacitors, with Suzuki nowhere teaching or remotely suggesting the fabrication of a gas sensor assembly. The Examiner stated that because the term "gas sensor assembly" was recited in the preamble of claim 11, he was not convinced that such term constituted a structural limitation of the claim. The undersigned proposed to amend claim 11 as amended herein, and the Examiner suggested that such amendment may help distinguish the claim over Suzuki.

B. Allowable Subject Matter

In the January 12, 2007 Office Action, claims 1-10 and 12-38 were indicated as allowable.

C. Response to Rejection of Claim 11 Under 35 U.S.C. 102(b)

In the January 12, 2007 Office Action, claim 11 was rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,229,625 to Suzuki et al. ("Suzuki") entitled "SCHOTTKY BARRIER GATE TYPE FIELD EFFECT TRANSISTOR." Such rejection is traversed.

1. Law Regarding Anticipation

In order for a §102 rejection of claims to be legally proper, the single cited reference must meet the criteria stated in MPEP §706.02, i.e., the cited reference:

> **"must teach every aspect of the claimed invention either explicitly or implicitly. Any feature not directly taught must be inherently present."** (MPEP §706.02, Rejection on Prior Art [R-1]).

The governing law of CAFC decisions is consistent with such MPEP standard:

> "Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W.L. Gore & Assocs. v. Garlock*, 721, F.2d 1540, 220 USPQ 303 at 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). It is not enough that the prior art reference disclose all the claimed elements in isolation. Rather, "anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). Further, "[u]nder 35 U.S.C. § 102, anticipation requires that ... the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public." *Akzo, N.V. v. United States Int'l Trade Comm'n*, 808 F.2d 1471, 1 USPQ2d 1241, 1245 (Fed. Cir. 1986).

2. Patentable Distinction of Claim 11 Over Suzuki

As indicated previously, Suzuki discloses **semiconductor devices** such as transistors, resitors, and capacitors, but **nowhere teaches or remotely suggests the fabrication of a gas sensor assembly.** Amended claim 11 recites:

> **11. A gas sensor assembly comprising:**
> **a substrate; and**
> **a free-standing silicon carbide support structure comprising:**
> **at least one protruding support rising above the substrate and a lateral structure contacting the protruding support, wherein the lateral surface is coated with a layer of nickel or nickel alloy, wherein said nickel or nickel alloy layer is adapted to exhibit a response indicative of the presence or change of concentration of a target gas species.**

While Applicants submit that the preamble of claim 11 as originally presented sufficiently distinguished Suzuki by recitation of a "gas sensor assembly"[1] (since Suzuki nowhere teaches or

[1] *See, e.g., Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999) ("If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim"); and *Poly-America LP v. GSE Lining Tech. Inc.*, 383 F.3d 1303, 1310, 72 USPQ2d 1685, 1689 (Fed. Cir. 2004) (providing that recitation in

suggests any gas sensor assembly), such claim nevertheless has been amended herewith to eliminate any doubt as to the distinction of the claimed subject matter over Suzuki. Suzuki is directed to semiconductor devices having metallic electrodes deposited thereon for transmitting electic current *to or from a semiconducting device*. *See, e.g.*, Suzuki, col. 3, lines 42-44 & col. 4, lines 7-10[2]; col. 4, lines 30-37[3]; col. 4, lines 52-58[4]. **Nothing in Suzuki teaches or remotely suggests a gas sensor assembly generally, or more specifically a "nickel or nickel alloy layer ... adapted to exhibit a response indicative of the presence or change of concentration of a target gas species."**

Since Suzuki fails to disclose "each and every element of the claimed invention, arranged as in the claim" as required to support an anticipation rejection (*Lindemann, supra*), amended claim 11 cannot be anticipated by Suzuki. Withdrawal of the rejection of claim 11 is respectfully requested.

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claim preamble of a 'blown-film' does not state a purpose or an intended use of the invention, but rather discloses a fundamental characteristic of the claimed invention that is properly construed as a limitation of the claim).

[2] "[N]ickel (Ni) is evaporated on the channel layer 3, so that an **ohmic electrode** is produced and patterned as a **source electrode 5 and drain electrode 6** [of a field effect transistor]."

[3] For the purpose of resistivity control, the amount of the nitrogen donor being doped is controlled. Then, nickel (Ni) is evaporated on the resistant layer 9 as **ohmic electrodes** 10 and 11. The space between electrodes 10 and 11 becomes a **resistor** that is determined by the resistivity of the resistant layer 9, the interval between the electrodes and the thickness and the width of the resistant layer 9.

[4] A part of the oxide layer 12 is removed by etching so that an **ohmic electrode (Ni)** 13, and a capacitor electrode (Al) 14 are formed on the oxide layer 12. The space between the electrodes 13 and 14 becomes a **capacitor** determined by the thickness of the oxide layer and the area of the electrode.

CONCLUSION

Based on the foregoing, all of applicants' pending claims 1-38 are patently distinguished over the art, and in form and condition for allowance. The Examiner is requested to favorably consider the foregoing, and to responsively issue a Notice of Allowance. If any issues require further resolution, the Examiner is invited to contact the undersigned attorney at (919) 419-9350 resolve such issues without delay.

Respectfully submitted,

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